

Date: Wednesday, 9/26/2007 7:56:01 AM
User: Kim Johnston

Process Sheet

SPLIT

Customer : CU-DAR001 Dart Helicopters Services
Job Number : 34872-4
Estimate Number : 10032
P.O. Number : N/A
This Issue : 9/26/2007 S.O. No. : N/A
Prsht Rev. : NC
First Issue : N/A Type : MACHINED PARTS
Previous Run : 34643
Written By :
Checked & Approved By : 07.09.26
Comment : Est. B: 01.05.04 New Issue EC

Drawing Name : SADDLE BILLET
Part Number : D6101001
Drawing Number : D6101 REV A
Project Number : N/A
Drawing Revision : A
Material : N/A
Due Date : 10/26/2007 Qty: 300 Um: Each

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 PG PURCHASING



Comment: PURCHASING

Issue P/O: 4685

C 207109124

a) Description: Alluminum billet

b) 6.00" x 6.250" x 2.00" thick

c) Tolerance on length are +0.025"/-0.000" AE +/-0.008"

d) Grain direction along 6.00" length

e) Material: 7075-T7351 (QQ-A-250/12)

f) Material certification required

300

2.0 D6101001P 7075-T7351 2X6X6.25



Comment: Qty.: 1.0000 Each(s)/Unit Total : 300.0000 Each(s)

7075-T7351 2X6X6.25

3.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Receive & Inspect For Transit Damage

Ensure material certification is attached

C 207109124

100

4.0 QC6 DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

Ensure Material certification comply to Dwg D

08/26/11 4100

85 05/01/09

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: LD Date: 08/01/14
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 9/26/2007 7:56:01 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SADDLE BILLET

Job Number: 34872

Part Number: D6101001

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

Machining

8F 08/01/09

6.0

QC21

FINAL INSPECTION/W/O RELEASE



(100)

Comment: FINAL INSPECTION/W/O RELEASE

28/01/14

Job Completion



U 28-0611

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

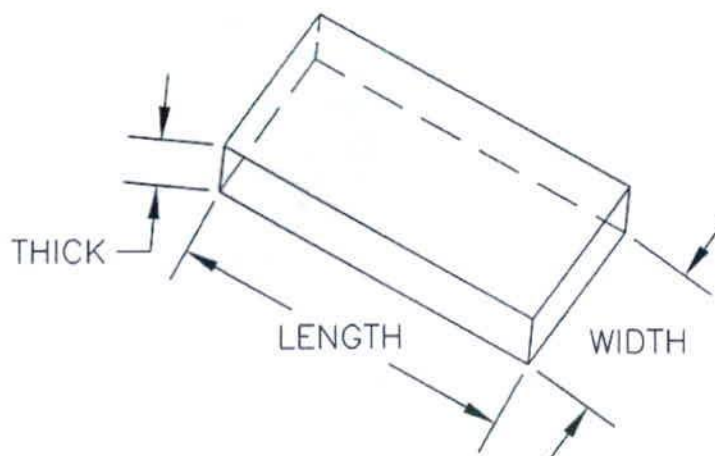
NOTE: Date & initial all entries



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>JS</i>	DRAWING NO. D6101	Rev. A SHEET 1 OF 1
DATE 01.03.30		TITLE SADDLE BILLET, 7075	SCALE NTS
A	01.03.30	NEW ISSUE	

SPECIFICATION CONTROL DRAWING

RELEASED
01.04.23 *#*



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 34872

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REQUISITION CLIENT-CUSTOMER REQUISITION NO.

NO. COM. CLIENT-CUST. ORD. NO.
4685

COMPTE-ACCT. VEND.-SLS TERR. EXPÉDIE PAR-CHIT. VIA
91037 200 40 TRUCK MANITOULA

ETEUR-PURCHASING AGENT
INDA LACELLE

TELEPHONE
613 632-3336

H/C TAXE NO. COM. ORD
9 0 1 C/C

REGION LIVRAISON-DEL ZONE
PREPAID

F.A.B.-F.O.B.

BILL

NO. FEVILE/EMBALLAGE-B/L NUMBER

IE A-SHIP TO:

VENDU A-SOLD TO:

DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY

ON K6H 1K7

INFORMATION CRÉDIT-CREDIT INFORMATION

R2C SEE FRANCE STATUS

ROUTE

01-NL-10/29
31-NL-01/30

TRUCTIONS/LIVRAISON-DELIVERY
NG-H60156

INSTRUCTIONS LIVRAISON (CONT.)-DELIVERY (CONT'D.)

INSTRUCTIONS LIVRAISON (CONT.)-DELIVERY (CONT'D.)

SCRIPTION - ITEM 1

2.0000 PLATE 7075-T7351 ALUM 6.25" X 6.00"

BLACK W/RED STRIPE

QTE/UNITE COM.-ORDERED

100 PCS PCS

POIDS COM.-WT. ORDERED

758

BALLOTS-BUNDLES

PCES/PO EXP. SHP

POIDS EXP.-WT. SHIPPED

1 100

758

FORME-SHAPE I.A.C.

6857

CERTIFICATE OF CONFORMANCE

INSTRUCTIONS

TOL: +.025"/-.000"
THICKNESS TOL.: +.030"/-.000"
GRAIN TO RUN ALONG 6.00"
ATTN MARTINE: NE PAS EXPEDIER
PRIOR DIST/ORD: 01 434025

COULÉE INFO-HEAT INFO

QTE-QTY

713066AL 42

403711AS (600) 58

INSTRUCTIONS (CONT'D.)

100 X 6.25" X 6.0"

A.M. Castle & Co. certifies that the material(s) supplied under this document will meet and conform to the specifications of the product(s) described hereon.
A.M. Castle & Co. (Canada) Inc.

WEIGHT FOR SHIPPING PURPOSES ONLY. SEE INVOICES FOR ACCURATE BILLING WEIGHT. PLEASE SIGN AND DATE DRIVER'S COPY FOR RECEIPT OF MATERIAL AND, IF CHECKED, TEST REPORTS.

SCRIPTION - ITEM 2

TERMS AND CONDITIONS OF SALE

SEE DISCLAIMERS AND LIMITATIONS ON THE REVERSE SIDE

INSTRUCTIONS

1 BOX

COULÉE INFO-HEAT INFO

QTE-QTY

INSTRUCTIONS (CONT'D.)

QTE/UNITE COM.-ORDERED

PCES/PO COM. ORD

POIDS COM.-WT. ORDERED

BALLOTS-BUNDLES

PCES/PO EXP. SHP

POIDS EXP.-WT. SHIPPED

FORME-SHAPE I.A.C.

ENT-WHS

SCRIPTION - ITEM 3

ALL EXCEPTIONS FOR SHORTAGE OR DAMAGE MUST BE NOTED ON THE DRIVER COPY & CUSTOMER COPY OF THE DELIVERY RECEIPTS & SIGNED BY THE DRIVER & CUSTOMER. COPY OF SUCH RECEIPT PROPERLY NOTED MUST BE SUBMITTED WITHIN 10 DAYS WHEN CREDIT IS REQUESTED.

INSTRUCTIONS

COULÉE INFO-HEAT INFO

QTE-QTY

INSTRUCTIONS (CONT'D.)

QTE/UNITE COM.-ORDERED

PCES/PO COM. ORD

POIDS COM.-WT. ORDERED

BALLOTS-BUNDLES

PCES/PO EXP. SHP

POIDS EXP.-WT. SHIPPED

FORME-SHAPE I.A.C.

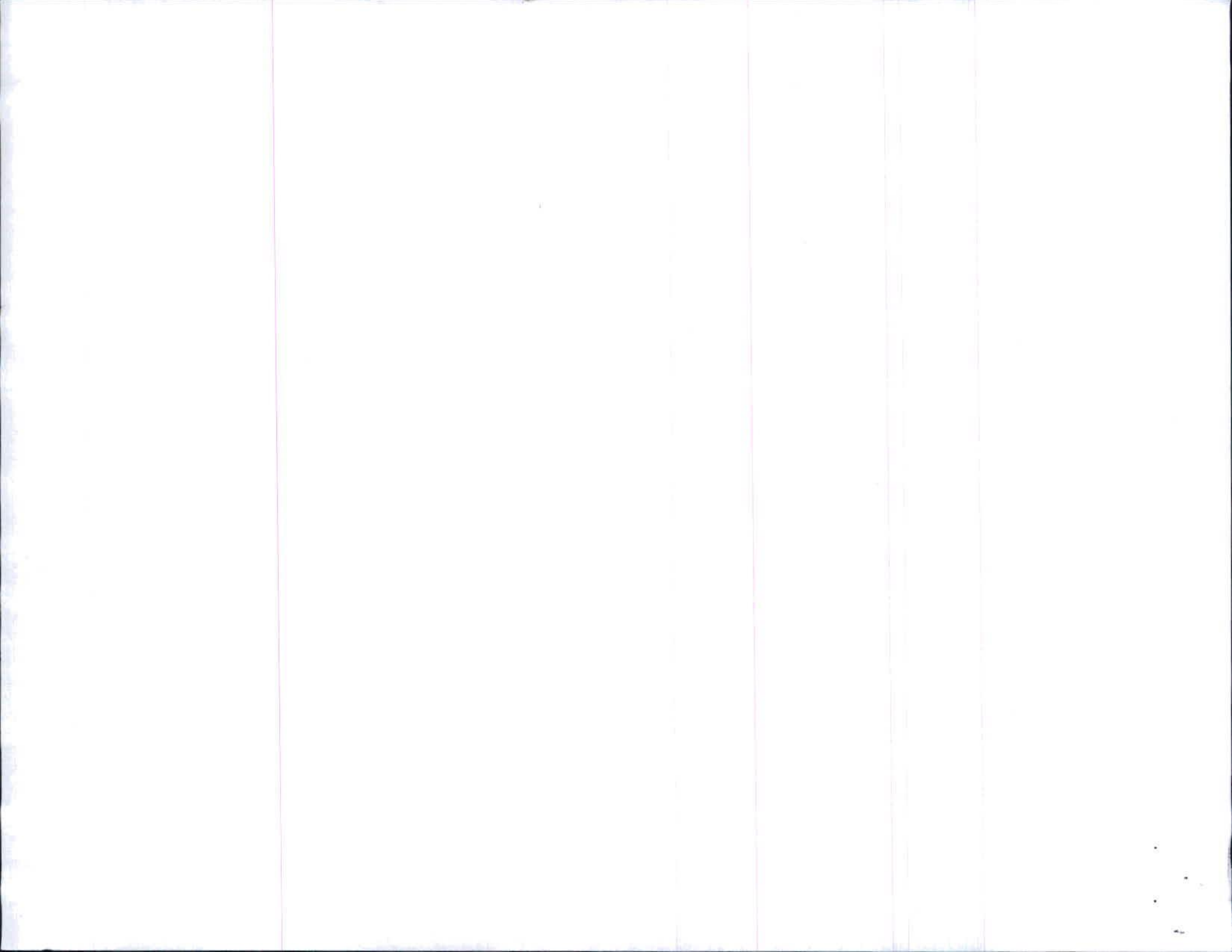
ENT-WHS

NOM (LETTRE MOULEE)-NAME (PRINT ONLY)

RECU PAR-RECEIVED BY

DATE RECU-
DATE RECEIVED

FFVILE D'EMBALLAGE - PACKING SLIP



SHIP TO:
A M CASTLE & CO
3400 NO. WOLF ROAD
FRANKLIN PARK, IL 60131

SOLD TO:
AM CASTLE & CO
3400 NO. WOLF ROAD
FRANKLIN PARK, IL 60131

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4099554

CUSTOMER PO NUMBER: 01-84412		WORK PACKAGE:		CUSTOMER PART NUMBER: 6857 A97075-80		SHIP RUN/LOAD ID: 100982/24		GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1049378	LINE ITEM: 1	SHIP DATE: 8-JUN-2007	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: MILL FINISH PLATE			
WEIGHT SHIPPED: 4300 LB	QUANTITY: 3 PCS EST.	B/L NUMBER: 2013189	GAUGE: 2.0000 IN		WIDTH: 48.500 IN	LENGTH: 144.500 IN			

Certified Specifications

AMS 4078/RevG
ASTM B 209/Rev06
BSS 7055/RevA
DPS 4.713/RevN/AmdAF
GSS16100/RevG

AMS-QQ-A-250/12
ASTM B 594/Rev06
CMMP 025/RevR
EAC MS1011/RevD
MMS 159/RevN

AMS-STD-2154
BAC 5439/RevH
CSTI 006/RevG
GAMPS 9101/RevB
PS 21211/RevK

Test Code: 4297

Test Results

Lot: 403741A5		Cast 97E	Drop 81	Ingot 3		
Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %	
	T7351	LT / 2 (Min:Max)	73.7 : 73.8 (508 : 509)	62.3 : 62.8 (430 : 433)	11.5 : 11.6	
Conductivity %IACS :			42.0 Min	42.5 Max		
(MS/M) :			24.4 Min	24.7 Max		

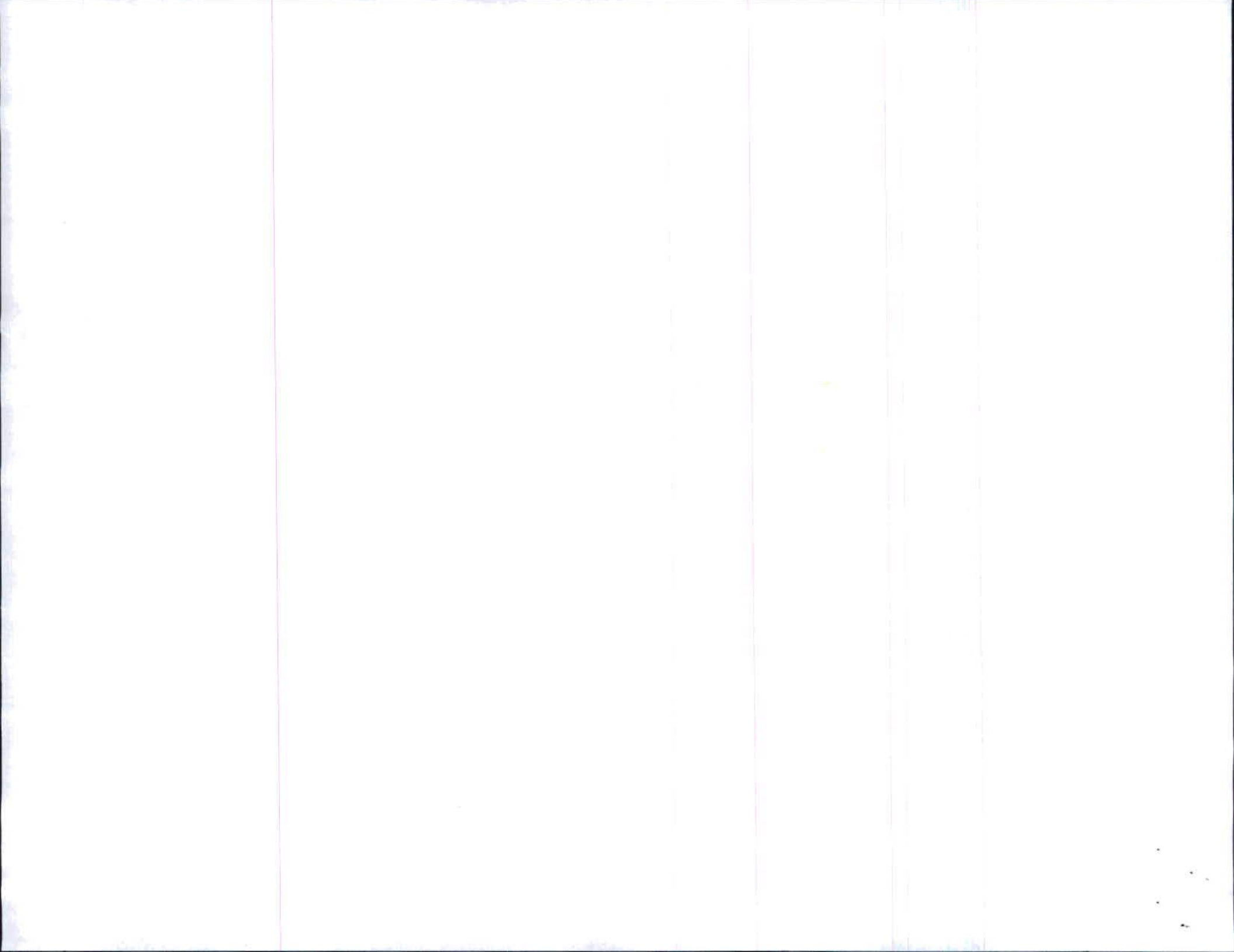
Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.11	1.5	0.01	2.5	0.19	5.7	0.01	0.01	0.00	TOT 0.03

ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

CASTLE METALS CORP.
DATE RCVD 6/11/07
IAC 6857
APPROVED BY fw-2



KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4099554

TEST NOTES

Metal represented by this test report was immersion
ultrasonically tested from one side and meets the Class A
and Class B requirements of all specifications referenced
on this test report.

CERTIFICATION

KAISER ALUMINUM & CHEMICAL CORPORATION (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED AND MANUFACTURED IN THE U.S.A. AND HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT-TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS ARE ON FILE, SUBJECT TO EXAMINATION. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM & CHEMICAL CORPORATION LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULANT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED

BILL POYNOR, LABORATORIES SUPERVISOR





SHIP TO: A M CASTLE & CO 3400 NO. WOLF ROAD FRANKLIN PARK, IL 60131
SOLD TO: AM CASTLE & CO 3400 NO. WOLF ROAD FRANKLIN PARK, IL 60131

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4099554

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KAISER ORDER NO: 1049378	LINE ITEM: 1	SHIP DATE: 8-JUN-2007	ALLOY: 7075	CLAD: BARE
WEIGHT SHIPPED: 4300 LB	QUANTITY: 3 PCS EST.	B/L NUMBER: 2013189	TEMPER: T7351	PRODUCT DESCRIPTION: MILL FINISH PLATE
		GAUGE: 2.0000 IN	WIDTH: 48.500 IN	LENGTH: 144.500 IN

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BSS 7055/RevA
DPS 4.713/RevN/AmdAF
GSS16100/RevG

AMS-QQ-A-250/12
ASTM B 594/Rev06
CMMP 025/RevR
EAC MS1011/RevD
MMS 159/RevN

AMS-STD-2154
BAC 5439/RevH
CSTI 006/RevC
GAMPS 9101/RevB
PS 21211/RevK

Test Code: 4297

Test Results

Lot: 403711A5 Cast 976

Drop 81

Ingot 3

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	73.7 : 73.8 (608 : 509)	62.3 : 62.8 (430 : 433)	11.5 : 11.6
		Conductivity %IACS :	42.0 Min	42.5 Max	
		(MS/M) :	24.4 Min	24.7 Max	

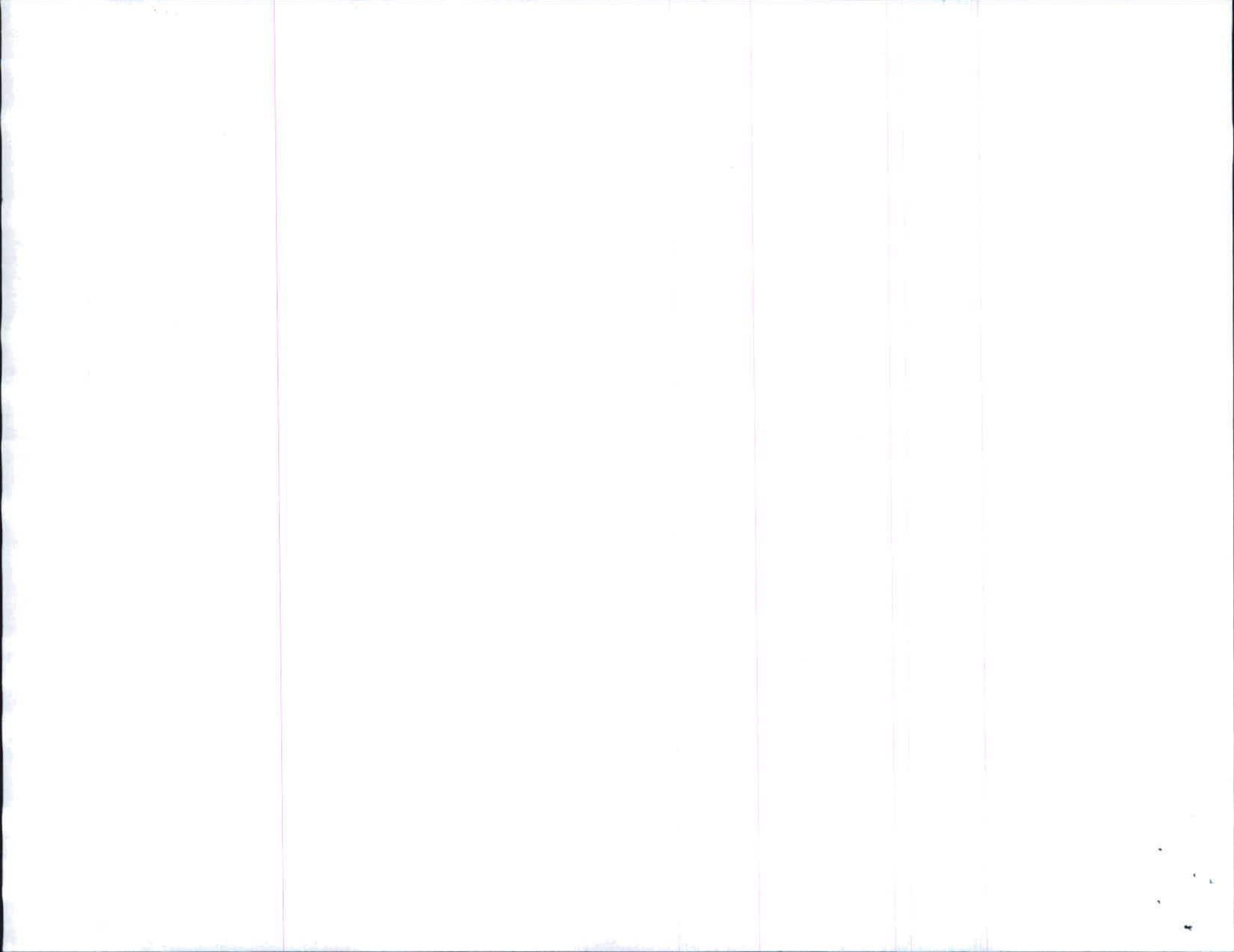
Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.11	1.5	0.01	2.5	0.19	5.7	0.01	0.01	0.00	TOT 0.03

ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

CASTLE METALS CORP.
DATE RCVD 6/11/07
IAC 6857
APPROVED BY [Signature]



**KAISER
ALUMINUM**Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586**CERTIFIED TEST REPORT**

Serial Number

4110419

Lot: 414187A5 Cast 129 Drop 42

Ingot 1

(ASTM E8/B557)

Tensile: Temper Dir / # Tests
T7351 LT / 2 (Min:Max)Ultimate KSI (MPA)
73.0 : 73.0
(503 : 503)Yield KSI (MPA)
62.5 : 62.5
(431 : 431)Elongation %
10.4 : 11.9(ASTM E1004)
Conductivity %IACS :
(MS/M) :41.9 Min
24.3 Min41.9 Max
24.3 Max

(ASTM E1251)

Chemistry: SI FE CU MN MG CR ZN TI V ZR OTHER
Actual 0.11 0.19 1.4 0.02 2.4 0.20 5.5 0.02 0.01 0.01 TOT 0.03

Lot: 713666A8 Cast 100 Drop 02

Ingot 1

Parent Lot: 413783A2

(ASTM E8/B557)

Tensile: Temper Dir / # Tests
T7351 LT / 2 (Min:Max)Ultimate KSI (MPA)
70.4 : 71.8
(485 : 495)Yield KSI (MPA)
59.9 : 61.6
(413 : 425)Elongation %
12.1 : 12.4(ASTM E1004)
Conductivity %IACS :
(MS/M) :42.2 Min
24.5 Min42.3 Max
24.5 Max

(ASTM E1251)

Chemistry: SI FE CU MN MG CR ZN TI V ZR OTHER
Actual 0.12 0.20 1.4 0.02 2.4 0.19 5.5 0.02 0.01 0.01 TOT 0.04**ALLOY LIMITS**

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

TEST NOTES

Metal represented by this test report was immersion
ultrasonically tested from one side and meets the Class A
and Class B requirements of all specifications referenced
on this test report.

